

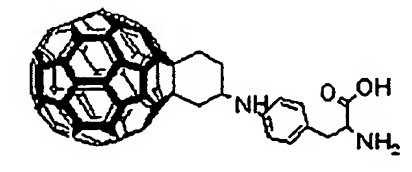
AMENDMENTS TO THE CLAIMS

Current additions to the claims are noted with underlined text. Current deletions from the claims are indicated by ~~strikethrough~~ text.

1 (Currently Amended). An amino acid composition having a general formula of at least one of $\text{H}_2\text{N}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{OH}$, $-\text{HN}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{OH}$, $\text{H}_2\text{N}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{O}-$, and $-\text{HN}-\text{CH}(\text{R})-\text{C}(\text{O})-\text{O}-$, wherein the R functionality comprises a fullerene species derived from a buckyketone and ~~wherein said R functionality is hydrolysis resistant under typical biological conditions.~~

2 (Original). The amino acid composition of claim 1, wherein said amino acid composition is a buckyamino acid.

3 (Currently Amended). The amino acid composition of claim 1, wherein said amino acid composition comprises the following compound:



~~is 5.~~

4 (Original). The amino acid composition of claim 1, wherein the fullerene species is selected from the group consisting of fullerenes, buckyballs, buckyonions, buckytubes, and combinations thereof.

5 (Currently Amended). The amino acid composition of claim 1, wherein both the amine functionality and the carboxylic acid functionality on the amino acid are protected, and wherein

the amino acid has a general formula of -HN-CH(R)-C(O)-O-.

6 (Currently Amended). The amino acid composition of claim 1, wherein one of either the amine functionality or the carboxylic acid functionality on the amino acid is protected, and wherein the amino acid has a general formula of at least one of -HN-CH(R)-C(O)-OH- and H₂N-CH(R)-C(O)-O-.

7 (Original). The amino acid composition of claim 6, wherein the amine functionality is protected with a protecting group selected from the group consisting of Boc, Fmoc, and combinations thereof.

8 (Cancelled). ~~The amino acid composition of claim 1, wherein the fullerene species is endohedrally doped.~~

9 (Currently Amended). The amino acid composition of claim 1 8, wherein the fullerene species is endohedrally-doped with a species selected from the group consisting of radioactive species, non-radioactive species, metals, gases, spin 1/2 nuclei, and combinations thereof.

10 (Currently Amended). ~~A amino acid residue comprising an amino acid of claim 1~~ synthetic polymer comprising an amino acid composition, wherein the amino acid composition has a general formula of at least one of H₂N-CH(R)-C(O)-NH- and -HN-CH(R)-C(O)-NH-, and wherein the R functionality comprises a fullerene species derived from a buckyketone.

11 (Currently Amended). The synthetic polymer ~~amino acid residue~~ of claim 10, further comprising at least one naturally occurring amino acid.

12 (Currently Amended). ~~A~~ The synthetic polymer of claim 10, comprising an amino acid composition of claim 1, wherein the synthetic polymer is selected from the group consisting of

peptide chains, polypeptides, proteins, and combinations thereof.

13 (Currently Amended). The synthetic polymer of claim ~~42-10~~, wherein the synthetic polymer is a protein exhibiting ~~comprising~~ a biological function selected from the group consisting of enzymatic functions, antibody functions, oxygen transport, ion transport, and combinations thereof.

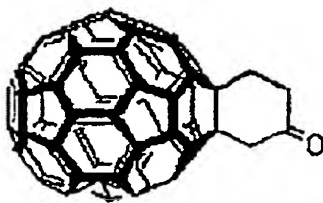
14 (Currently Amended). The synthetic polymer of claim ~~42-10~~, wherein the fullerene species is a structure-determining element in the synthetic polymer.

15 (Currently Amended). The synthetic polymer of claim ~~42-14~~, wherein the fullerene species provides for reaction "pockets" within said polymer.

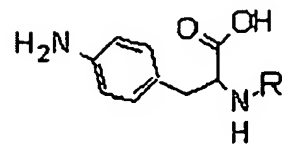
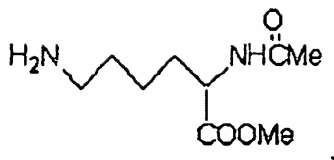
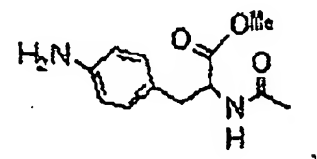
16 (Original). The synthetic polymer of claim 14, wherein the fullerene species serves as a link between at least two amino acids.

17 (Currently Amended). A method comprising the steps of:

a) reacting the following compound +

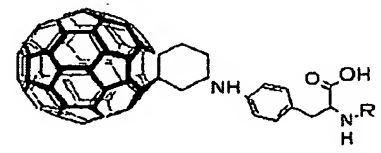
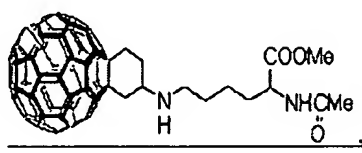
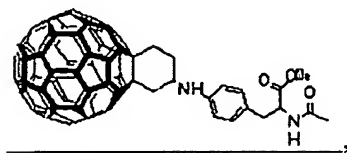


with a compound selected from the group consisting of



2, 7, 10, and combinations thereof [,] to yield an imine intermediate; and

b) hydrogenating the imine intermediate with BH_3 -THF to yield at least one product selected from the group consisting of

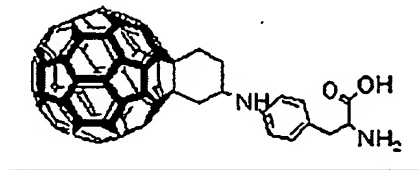


4, 9, 12, and combinations thereof.

18 (Currently Amended). The method of claim 17, further comprising a deprotection step that provides for an amino acid composition of claim 1.

19 (Cancelled). The method of claim 18, wherein the amino acid composition is a buckyamine acid.

20 (Currently Amended). The method of claim 18, wherein the method yields amino acid composition comprises the following compound:



ATTORNEY DOCKET NO.
11321-P080WOUS

PATENT
Serial No. 10/585,277

5.

21 (Cancelled). ~~The method of claim 17, further comprising a step of forming amino acid residues that comprise an amino acid composition of claim 1.~~

22 (Cancelled). ~~The method of claim 17, wherein said amino acid residues further comprise naturally occurring amino acids.~~